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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,288	12/28/2001	You Sung Kang	P67500US0	3114
43569 7590 06/21/2007 MAYER, BROWN, ROWE & MAW LLP 1909 K STREET, N.W. WASHINGTON, DC 20006			EXAMINER ANYA, CHARLES E	
			ART UNIT 2194	PAPER NUMBER
			MAIL DATE 06/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/029,288

Applicant(s)

KANG ET AL.

Examiner

Charles E. Anya

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,9,10 and 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,9,10 and 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
WILLIAM THOMSON  
SUPERVISORY PATENT EXAMINER

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1,3,4,7,9,10 and 13-24 are pending in this application.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1,4,7,10 and 14 are rejected under 35 U.S.C. 103(a) a. being unpatentable over applicant's admitted prior art (hereinafter referred to as AAPA pages 2-3) in view of U.S. Pat. No. 5,923,759 to Lee.**

4. As to claim 1, AAPA teaches a method of setting a communication environment between a mobile terminal and a smart card using a layered architecture of a protocol stack, the system comprising: if the mobile terminal provides power to the smart card, sending an answer-to-reset signal from the smart card to the to the mobile terminal (page 2 lines 8 - 14); determining whether or not the received answer-to-reset signal complies with an answer-to-reset signal pattern required by the mobile terminal (page 2 lines 16 - 21); if the received answer-to-reset signal complies with an answer-to-reset signal pattern required by the mobile terminal, analyzing the answer-to-reset signal transferred from the smart card to establish a communication environment (Step S104

Art Unit: 2194

page 2 lines 20 - 24); if the optimum communication environment is established, sending a command for requesting to open a logical channel to the smart card/opening the logical channel in response to the command for requesting to open the logical channel received from the mobile terminal, and sending a signal responding to the command to the mobile terminal (Step S105 page 2 lines 26 - 28, page 3 lines 1 - 2); and opening the logical channel to be used in the application to secure a communication channel between the smart card and the mobile terminal (Step S106 page 3 lines 7 - 8); wherein if the optimum communication environment is not established, the mobile terminal sends a protocol/parameter selecting request to the smart card and the smart card responds if the protocol and parameter are supported otherwise, the smart card enters a standby mode to receive a reset command (page 2 lines 20 - 28) and wherein the answer-to-reset signal transferred from the smart card comprises at least one of a communication speed and a communication protocol, which are supported by the smart card itself (page 2 lines 13 - 15).

AAPA is silent with reference to an application layer including a plurality of applications and transmission layer including a plurality of communication environments capable of supporting the plurality of application of the application layer/a smart card that supports a plurality of applications and a plurality of communication speed and protocols that corresponds to each application.

Lee teaches an application layer including a plurality of applications (Application Program 400/Application Layer 412 Col. 8 Ln. 35 - 48, "Numerous different types application programs..." Col. 9 Ln. 1 - 13) and transmission layer including a plurality of

Art Unit: 2194

communication environments capable of supporting the plurality of application of the application layer/a smart card that supports a plurality of applications (CAPI 410 (Card ISO Layer/ISO Layer 416) Col. 8 Ln. 22 – 34, Col. 9 Ln. 14 – 32) and a plurality of communication speed and protocols that corresponds to each application (“...different protocols...” Col. 9 Ln. 14 – 32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of AAPA with the teaching of Lee because the teaching of Montgomery improve the system of AAPA by providing an application interface that allows applications to remain the same for different card manufacturers or chip operating system and therefore enabling an application to remains transparent to changes of a card or system (Lee Col. 9 Ln. 30 – 32).

5. As to claim 4, Lee teaches the method as claimed in claim 1, wherein the smart card and the mobile terminal comprise a transmission layer comprising a plurality of communication speeds and protocols supported by the smart or the mobile terminal for transmitting and receiving a data (Card ISO Layer/ISO Layer 416), and an application layer comprising a plurality of applications supported by the smart card or the mobile terminal for processing the data, respectively (figure 4, (Application Program 400/Application Layer 412) Col. 5 Ln. 29 – 40, Col. 8 Ln. 22 – 48, Col. 9 Ln. 14 – 32).

6. As to claims 7 and 14, see the rejection of claim 1 above.

Art Unit: 2194

7. As to claim 10, Lee teaches the storage medium as claim in claim 7, wherein the smart card and the mobile terminal each comprise a transmission layer for transmitting and receiving a data, an application for processing the data, respectively (CAPI Col. 5 Ln. 29 – 40, Col. 8 Ln. 22 – 48, Col. 9 Ln. 14 – 32); wherein the application layer of the smart card and the mobile terminal includes a plurality of applications (Application Program 400/Application Layer 412 Col. 8 Ln. 35 – 48, "Numerous different types application programs..." Col. 9 Ln. 1 – 13), and the transmission layer of the smart card (Card ISO Layer/ISO Layer 416) and the mobile terminal includes a plurality of communication environments capable of supporting the plurality of applications of the application layer (Application Program 400); and the transmission layer and the application layer are independently embodied to each other (Application Program 400/Application Layer 412 and Card ISO Layer/ISO Layer 416), so that one application supported by a plurality of communication protocols and one communication protocol supports a plurality of applications (figure 4 Col. 8 Ln. 22 – 48).

**8. Claims 3,9,13,15 and 16 are rejected under 35 U.S.C. 103(a) a. being unpatentable over applicant's admitted prior art (hereinafter referred to as AAPA pages 2-3) in view of U.S. Pat. No. 5,923,759 to Lee as applied to claim 1, and further in view of U.S. Pat. No. 6,199,128 B1 to Sarat.**

9. As to claim 3, Lee and AAPA are silent with reference to the method as claimed in claim 1, in the determining step, if he received answer-to-reset signal does not

Art Unit: 2194

comply with an answer-to-reset signal pattern required by the mobile terminal, the method further comprising the steps of: determining whether or not a process of a protocol and parameters selection is executed in the mobile terminal; sending a command for requesting to select the protocol and parameters to the smart card only if the mobile terminal executes the process of the protocol and parameters selection, otherwise sending a command for requesting to open a logical channel, which is to be used in the application, to the smart card.

Sarat teaches the method as claimed in claim 1, in the determining step, if he received answer-to-reset signal does not comply with an answer-to-reset signal pattern required by the mobile terminal, the method further comprising the steps of: determining whether or not a process of a protocol and parameters selection is executed in the mobile terminal (“...contacts...” Col. 2 Ln. 31 – 48, a Sixth Contact 32 Col. 5 Ln. 33 – 49); sending a command for requesting to select the protocol and parameters to the smart card only if the mobile terminal executes the process of the protocol and parameters selection (“...conventional ISO-standard mode...” Col. 2 Ln. 31 – 48), otherwise sending a command for requesting to open a logical channel, which is to be used in the application, to the smart card (“...different start-up...” Col. 2 Ln. 31 – 48, “... “non-ISO” mode...” Col. 5 Ln. 45 – 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Lee and AAPA with teaching of Sarat because the teaching of Sarat would improve the system of Lee and AAPA by providing

utilizing the functionality of a smart card without the need for a reader that strictly conforms to published standards for smart cards (Sarat Col. 3 Ln. 37 – 40).

10. As to claims 9,15 and 16, see the rejection of claim 3 above.

11. As to claim 13, see the rejection of claims 1,3 and 10 above.

**12. Claims 17-24 are rejected under 35 U.S.C. 103(a) a. being unpatentable over applicant's admitted prior art (hereinafter referred to as AAPA pages 2-3) in view of U.S. Pat. No. 5,923,759 to Lee as applied to claim 1, and further in view of U.S. Pat. No. 6,250,557 B1 to Forslund et al.**

13. As to claim 17, AAPA and Lee are silent with reference to the method as claimed in claim 1, further comprising: changing the application used at present to another application selected from the plurality of applications supported by the smart card; and establishing another communication environment suitable for said another application and secure another communication channel between the smart card and the mobile terminal based on said another communication environment.

Forslund teaches the method as claimed in claim 1, further comprising: changing the application used at present to another application selected from the plurality of applications supported by the smart card (“...listing of applications...” Col. 4 Ln. 51 – 54, “...determine which application...” Col. 7 Ln. 48 – 62); and establishing another



Art Unit: 2194

communication environment suitable for said another application and secure another communication channel between the smart card and the mobile terminal based on said another communication environment (“...RPC/RMI...” Col. 7 Ln. 48 – 62).

It would have been obvious to one of ordinary skill in the art at time the invention was made to modify the system of AAPA and Lee with the teaching of Forslund because the teaching of Forslund would improve the system AAPA and Lee by dynamically or automatically determining the services provided without user intervention (Forslund Col. 2 Ln. 58 – 61).

14. As to claim 18, Forslund teaches the method as claimed in claim 17, wherein the optimum communication environment is dynamically established for the application to be used at present (“...determine which application...” Col. 7 Ln. 48 – 62).

15. As to claims 19,21 and 23, see rejection of claim 17 above.

16. As to claims 20,22 and 24, see the rejection of claim 18 above.

### ***Response to Arguments***

Applicant's arguments with respect to claims 17-24 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 4/18/2007 (for claims 1,4,7,10 and 14) have been fully considered but they are not persuasive.

Applicant argues in substance that (1) the Lee prior art does not teach or suggest a smart card that has layered architecture and supports a plurality of applications and protocols and (2) the Lee prior art does not teach or suggest a smart card that includes independent transmission and application layers.

Examiner respectfully traverses Applicants arguments:

As to point (1), contrary to Applicant's argument the figure 4 of Lee prior art discloses a layered architecture which includes an application layer (Application Layer 412), a card layer (Card Layer 414), iso layer (ISO Layer 416 and card acceptance device. The card application programming interface (CAPI 410) which is embodied in the smart card supports plural protocols (column 9 lines 14 – 16) and the application layer of the smart card supports plural applications if for no other reason for the fact that the (Application Program 400) reads in application program from the application layer/card indicates that the application layer provides more than one application program since the (Application Program 400) includes "Numerous different types of applications (column 9 lines 1-13).

As to point (2), as claimed the invention (e.g. claim 10) describes independently embodied transmission and application layers as transmission and application layers that functions to support a plurality of communication protocols and one communication protocol supports a plurality of applications. Contrary to Applicant's assertion the Lee prior art cover this claim limitation by disclosing a card application programming interface (CAPI 410) that allows for plural protocols for communication between a smart card and a card reader. The (Card ISO Layer/ISO Layer 416) functions as the

Art Unit: 2194

transmission layer because they transmit data or call between the card reader and the smart card and are independent of the (Application layer412/Application Program 400) as figure 4 indicates.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is (571) 272-3757. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.


Art Unit: 2194

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-Ai can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles E Anya  
Examiner  
Art Unit 2194

cea.

  
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SUPERVISORY PATENT EXAMINER